Notes on Labour Market Demand/Supply Conditions for Selected British Columbia Occupations

Using both economic indicators and recent employer-based survey research this paper reviews a number of occupations where concerns over shortages have been raised at a national or provincial level. These are discussed from the perspective of current and future demand/supply conditions in British Columbia. This paper builds upon earlier Ministry work into "high opportunity" occupations < http://www.aett.gov.bc.ca/branches/ea/reports/swfresearch.pdf >, and ongoing analysis of training needs to respond to current and future labour market demand in BC.[1]

In summary, occupational areas of most immediate and future concern in BC with respect to labour market tightness or skills shortages include computer science and related engineers at the university level; registered nurses; physicians and pharmacists; and aerospace technical workers. A secondary group of occupations of slightly lesser immediate and future concern include licensed practical nurses; nursing care aides; hospitality, accommodation and food managers; and university professors and college instructors in particular disciplines such as business, computer science, and engineering. Skilled trades occupations such as plumbers, electricians and carpenters currently do not appear to exhibit extensive skills shortages conditions in BC, though future tightness and shortages in these and a number of skilled trades remain a concern given the retirements expected and relatively low number of new workers being trained in these areas.

Information Technology, Engineering and Aerospace Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
2244, 7315 ... Aircraft Electrical and Avionics Mechanics, Aircraft Mechanics	Structural challenge, much of the current tightness and well above average student outcomes for new graduates (near 100% employment rate) in these areas relates to ongoing retirements of aircraft mechanics at YVR, as well as expansion and replacement needs for technical aerospace workers by AvCorp, Conair and Westjet	Very tight conditions at present, shortage of available experienced workers. Future situation also very tight.
0213, 2163, 2162 ... Computer Systems Analysts, Computer Programmers, Managers in Information Systems...	The widespread application of information technology is expected to drive continued strong demand for workers in these occupational groups. Workers with a broad computer education with **computer science degrees** and industry recognized technical skills, continue to be in demand. Communication and business skills also are a major asset. Cyclical slowdown and the start of some restructuring in computer sector which began in the first half of 2001 has seen a slackening in tightness, but shortages remain in some niche areas and mainly for those with advanced skills & Computer Science degrees.	Currently shortages are in niche areas. Medium to longer term structural indicators suggest very tight conditions expected in future.
2133, 2147 ... Electrical & Electronics Engineers, Computer Engineers	There is expected to be considerable labour market tightness in BC and North America between new supply of university educated engineers in these specific areas and employment openings due to new and replacement retirement needs. Recent cyclical downturn and some restructuring in North American computer and related telecommunications sectors seen to date during 2001 only appears to slightly dampen the longer term structural requirements for such professional Engineers.	Very tight conditions currently Possible shortages in future as retirement/replacement issues compound demand for these professionals

[1] These notes are drawn from ongoing occupational research and analysis conducted by Youth and Labour Market Services Branch for purposes of developing career and labour market planning and decision making resources such as Work Futures: British Columbia Occupational Outlooks. They do not represent the official position or views of any one agency within or outside government. All errors or omissions remain the responsibility of the authors.

Health Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
3152 ... Registered Nurses and Registered Psychiatric Nurses	General consensus and evidence in BC, other provinces and the US that there is a shortage of available and qualified nurses for the number of employment openings. The need to replace nurses changing occupations, retiring, moving to other provinces or the US has and will continue to create substantial number of openings for nurses. An aging population requiring more institutional and home-based nursing will contribute to the demand for new nurses in the future. Specialty nurses (emergency, operating room and intensive care), and registered nurses with several years experience in general practice, are currently most in demand and this will likely continue in the future. Actions identified and underway to address shortages include increasing the number of graduates, recruitment and retention initiatives, and structural changes by employers including attracting nurses working out of profession back into nursing.	Current shortage provincially, nationally and in the US Continuing tightness expected based on expected retirements, employment growth, high rates of occupational change and lags in new supply due to training time of 3-4 years. This will ease given recent initiatives including 1,000 new nursing education seats, recruitment of non-practicing RN's and foreign trained specialty nurses, and forgivable loans for nurses practicing in under-served BC communities.
3233 ... Licensed Practical Nurses (LPN's)	Given the large proportion of current LPN's aged 50 and older, considerable numbers of openings will occur due to retirements of existing LPNs this decade and next. At the same time considerable expansion of public and private LPN seats and programs now underway or planned will boost supply. At present administrative data on numbers of registered LPNs in BC indicates that only about half of those employed in nursing-related occupations have full-time hours. Only about 60% of qualified and registered LPNs are actually employed in a licensed practical nurse position. Most of the remaining 40% are in other related nursing or non-nursing-related employment. BC has the lowest LPN to RN ratio in Canada, and the recently expired Registered Nurses contract forbids employing LPN's in RN positions. This has constrained additional LPN employment, though this may change if LPN to RN ratios change.	Labour market tightness is moderate at present with some shortages for part-time and casual positions. Future tightness expected to increase, though severity will be constrained with additions of graduates now being trained, and the degree to which the role of LPN's will expand vis a vis RN's.
3413 ... Nursing Aides (including resident care attendants, health care aides, nursing attendants, personal care attendants and orderlies)	This very large occupational group is forecast to grow at an average rate based on projected population growth and traditional service delivery models. However, this group is older than average and as a result there will be more openings to replace retiring workers than from employment growth. Turnover or attrition continues to be high and this contributing to the demand for workers. Low wages in some settings play a significant role in this. There has been a shift away from using nursing aides towards using more RNs and LPNs in hospitals and this is expected to continue. Over 60% currently work outside of hospitals and in a variety of health and social service agencies primarily residential care facilities and home care. The demand for nursing aides will depend on how they are utilized along with RNs and LPNs	Current and ongoing high demand, due to lower wages in positions in non-hospital settings, and turnover

Health Occupations (cont.)

NOC # and Title	Comments	Current/Future Labour Market Conditions
3111, 3112 ... Specialist Physicians, Family Physicians	There is strong evidence in BC, other provinces and the US that there is a shortage of available and qualified physicians in specific, often rural regions and specialties. A faster than average growth rate is forecast for the specialist physicians and an average growth rate is forecast for family physicians based on population growth and traditional service delivery models. This combined with retirements, competition from other provinces and the US, an aging population, and new technologies for diagnosis and treatment, will contribute to the demand for new physicians in the future. Retirement of specialist physicians will create about 50% more openings than openings due to employment growth over the next ten years. However, the retirement of family physicians will create nearly double the number of openings expected from employment growth. The shortage of physicians is most acute in rural areas of BC. Increasing the number of spaced for students in medical schools will help address long term requirements by increasing the supply of new graduates in four to seven years.	Current shortage provincially, nationally and in the US, but often mainly in rural areas Continuing tightness or shortage expected based on expected retirement, employment growth, and significant lag time of training as an additional supply response.
3131, 0621 ... Pharmacists and Pharmacy Managers, Drug Store Managers (In 0621 - Retail Trade Managers)	Industry and association sources indicate that there is a shortage of available pharmacists throughout BC for the number of vacant openings. This also appears as a North American problem. A faster than average growth rate is forecast for the occupation and this combined with retirements and progression into management will add to the demand for new pharmacists in the future. The expanding role of pharmacists in the primary health care and in providing preventative health services will contribute to the increased need, along with population growth and an aging population. Pharmacists average earnings increased from $42,900 in 1990 to $52,500 in 1995. The higher than average increase in wages over the last two census, a 22% increase compared to an all-occupation average increase of 13%, is an indicator of occupational shortage for an occupation where earnings are market driven (nearly 80% of pharmacists work in the retail trade sector).	Current shortage provincially, nationally and in the US. Continuing tightness or shortage expected based on expected retirement, employment growth, and significant lag time of training in additional supply response.

Social and Education Professional Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
4152 ... Social Workers	Demand and supply conditions are difficult to assess as the "social worker" title is unregulated. This creates difficulty in clearly defining "social work" positions as regulation of social work practice is largely voluntary, though it is regulated for particular types such as "child protection workers" and "mental health workers". However, some evidence suggests recruitment of BSW grads is a problem for the Ministry of Children and Families as new graduates are seeing multiple other job opportunities. Employment outcomes for new graduates from BSW Programs are well above average. Retention of Social Workers by public employers also remains a challenge as many leave to work in other occupations. Generally there is an older work force in these social work occupations which is contributing to considerable recent and expected new and replacement work opportunities. New standards for child protection workers, and new specialization streams of BSW graduates have been developed to meet needs for child protection worker, where employment opportunities remain very strong - especially outside the larger metropolitan regions.	Moderate tightness currently, some shortages in particular geographies, and in child protection.
4142, 4141 ... Elementary Teachers, Secondary Teachers	Provincially a balanced situation between projected openings and expected supply expected (BC trained and out-of-province certifications), but in future regionally some extreme tightness and possibly shortage situation in particular teaching subject specialties. Given the relatively improved outlook in full-time regular teaching positions opening up due to retirements this decade, there is likely to be a considerable tightening in the availability or shortage of new teachers willing or available to fill part-time or substitute teaching contracts than in the past.	Balanced to modest tightness currently; Moderate tightening expected
4121, 4131 ... University Professors, College Instructors	Estimated up to 40% of current BC faculty will need to be replaced by 2010, similar situation across North America. Particular disciplines currently see major recruitment challenge and competition between employers for potential new faculty, including Business/Commerce, Computer Science, & Engineering.	Moderate tightness currently. Expected to intensify this decade

Skilled Trades Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
7241, 7251, 7271 ... Electricians, Plumbers, Carpenters	Skilled trades occupations in BC such as plumbers, electricians and carpenters currently do not exhibit the same extensive tightness or skills shortages conditions in BC as in Alberta, Manitoba and Ontario - due to the construction boom experienced in those provinces in 1999 and 2000. However, this has cooled somewhat in the first half of 2001 with the slowdown in North American economic growth. Future tightness and shortages in these and other skilled trades remain a concern due to retirements and relatively low number of new workers being trained in these areas.	Balanced situation currently with some geographic tightness. Future moderate tightening expected.

Hospitality and Tourism Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
0631, 0632 ... Managers in Food Service and Accommodation	The tourism industry is indicating that at present the industry is experiencing shortages of qualified managers. Growth in the accommodation and food services industries, as well as worker turnover, is contributing to ongoing need for experienced workers. These management positions are often open to younger workers with somewhat less experience than is required in other industries. Earnings for these managers increased 17% from 1990 to 1995, from an average of $25,600 to $29,900. While the increase was more than the all occupation average of 13%, the average earnings are significantly less than the all worker average of $39,400 in 1995. While the higher growth rate in earnings suggests a shortage of workers, the low average earnings is problematic when it comes to attracting skilled workers into this occupation.	Current and ongoing high demand, due to lower wages and turnover, does not appear to be due to a lack of training supply.
6241, 6242 ... Chefs and Cooks	Above average growth in the hospitality and tourism industries continues to generate new jobs and high demand for workers in this very large occupational group. Note that there are more than seven times as many cooks as chefs and that most of the new openings will be for cooks. Turnover is also providing many additional employment opportunities. The impact of worker retirement will be less with this occupational group as the average age is lower than the all worker average. Workers with trade certification or post-secondary training tend to have less unemployment and the best advancement prospects. Earnings for chefs increased from an average of $25,000 in 1990 to $27,200 in 1995. Average earnings for cooks were $19,500 in 1990 and increased to $20,982 in 1995. However, in both cases earnings increased less than the 13% average increase for all workers over this period. These lower than average earnings (the all worker average is $39,400) may be contributing in part to the continuing difficulty in recruiting and retaining skilled workers.	Current and ongoing high demand, due to lower wages and turnover, does not appear to be due to a lack of training supply

Sales and Service Occupations

NOC # and Title	Comments	Current/Future Labour Market Conditions
622, 641 ... Technical Sales Specialists and Representatives, Wholesale	These are large occupational groups covering a range of sales specialties, including medical devices, computer and electronic hardware, health products, and particular transportation, scientific and manufacturing equipment and parts. Prior industry or product experience and knowledge are usually required, especially for technical sales specialists. Above average earnings, career progression opportunities and a high incidence of full-time, full-year work are available in these fields.	Current and on-going high demand, but largely for those with niche and particular product experience or knowledge. There are also succession planning challenge for this group.

Sales and Service Occupations (cont.)

NOC # and Title	Comments	Current/Future Labour Market Conditions
0621 ... Retail Trade Managers	This occupational group employs the second largest number of people in BC, next to retail salespersons. It is forecast to grow faster than average over the next ten years with almost as many openings from retiring workers as from employment growth. All of these factors are contributing to continuing high demand for retail trade managers. Earnings increased by 7% from 1990 to 1995, from $33,000 to $35,300. They remain slightly lower than the all worker average of $39,400. Lower than average earnings likely contribute to the difficulty in attracting and retaining skilled workers. Note that 40% of those in this occupational group are self employed and this may contribute to the slightly lower average reported earnings.	Current and ongoing high demand, due to turnover and movement of experienced workers to other sectors. These shortages do not appear to be due to a lack of training supply

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